

Work Order ID 164482

Wednesday, July 19, 2017 2:40:57 AM

164482

Page 1

Item ID: D412-664-301 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Cap Assembly Bumper, 205/212/412
 Start Date: 7/19/2017 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 7/21/2017 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: DAS 21 Date: JUL 19 2017 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: 9-29 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
IIN-D212-664	F	AUG 01 2017							
100	Document Control	0.00	DAS	6					
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile and create labels per PPP D412-664-301 chg001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.18							
Quality Control									

DAS
27
9-89
AUG 08 2017

AUG 04 2017

DAS
26
9-89

DAS
27
9-89
AUG 08 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

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Page 2

Item ID: D412-664-301 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cap Assembly Bumper, 205/212/412
Start Date: 7/19/2017 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 7/21/2017 Req'd Qty: 6.00 ***6*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: _____	0.00							
130	Packaging						DAS 27		
Packaging	Memo	0.00					8-89		
Packaging	Identify and pack for shipping as per PPP D412-664-301 Location: FG124 PPP Rev: _____						8/8/17		
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.60							
Quality Control									



AUG 08 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Wednesday, July 19, 2017 2:41:00 AM

Page 1

Work Order ID: 164482

164482

Parent Item: D412-664-301

D412-664-301

Parent Item Name: Cap Assembly Bumper, 205/212/412

Start Date: 7/19/2017

Required Date: 7/21/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 11.11.03 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D4381-1		Manufactured	No			110	Each	67.0000	2	12			
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D4381-1

X-Tube Strap Bumper

**

DAS
26
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST095

44

151300

44

ST103a

23

151300

23

12

pl AUG 04 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

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Root Cause		FAULT CATEGORY																							
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OTHER : _____																									

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Item ID: D412-664-301

Accept

N900040100

Revision ID:

Item Name: Cap Assembly Bumper, 205/212/412

Start Date: 7/19/2017 Start Qty: 6.00

6

Cust Item ID:

Required Date: 7/21/2017 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: **JUL 19 2017** Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Acc Qty
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Draw Nbr	Revision Nbr	AUG 01 2017				
IIN-D212-664	F					
100	Document Control	0.00				DAS
100	DOCUMENT CONTROL					5
DC	Memo	0.00				9-89
Doc.Control -USB or Paperwork		Photocopy bluefile and create labels per PPP D412-664-301 chg001				

110	Pick Kit	0.00				
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110						
Packaging	Memo	0.00				
Packaging						

120	QC4- 100% Inspect kits for completeness	0.00				
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120						
QC	Memo	0.18				
Quality Control						

AUG 03 2017



Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH01-9

Issue No.: 3

Approval Date: February 19, 2001

Issue Date: June 08, 2005

Responsible Office:

Ontario

Aircraft/Engine Type or Model:

BELL 204B, 205A-1, 205B, 212, 214B, 214B-1, 412, 412 CF,
412 EP

Canadian Type Certificate or Equivalent:

BELL 205B H-104
BELL 214 series H-80
BELL 212, 412 series H-86
BELL 204B, 205A-1 H1SW

Description of Type Design Change:

Crosstube Installation

**Installation/Operating Data,
Required Equipment and Limitations:**

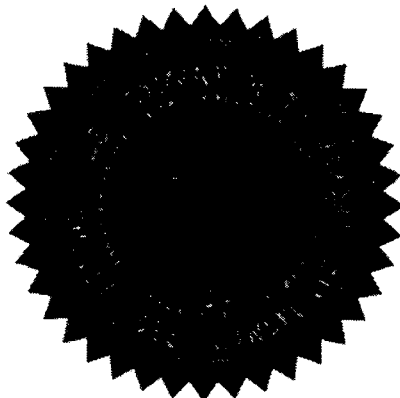
Manufacture of the Crosstube Installation must be in accordance with Dart Aerospace Ltd. MDL-D212-664, Revision A, approved June 08 2005, or later approved revisions.

Installation of the Crosstube Installation must be in accordance with Dart Aerospace Ltd. IIN-D212-664, Revision C, approved Jan 17 2005, or later approved revision.

Maintenance of the Crosstube Installation must be in accordance with Dart Aerospace Ltd. ICA-D212-664, Revision 2, Transport Canada accepted Jun 08 2005, or later Transport Canada accepted revisions.

Operation of the Bell 214B and 214B-1 model types with the Crosstube Installation must be in accordance with Dart Aerospace Ltd. FMS-D214-664, Revision A, Transport Canada approved Jun 08 2005, or later Transport Canada approved revisions.

See continuation sheet



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.


M. G. Mariotti
For Minister of Transport